

STATE APPROVED SCHOOL BUS INSPECTOR MANUAL



KENTUCKY DEPARTMENT OF EDUCATION
DIVISION OF SCHOOL FINANCE
PUPIL TRANSPORTATION BRANCH
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STATE APPROVED SCHOOL BUS INSPECTOR COURSE

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A. BUS SCHEDULING FOR PM

1. Tuesday Report - Mileage
2. Vehicle PM Inspection Report for Week Ending _____
3. Vehicle Maintenance Inspections Due
4. PM Inspection Master Schedule

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Week One					
Week Two					
Week Three					
Week Four					

FLEET PREVENTIVE MAINTENANCE SCHEDULE

The Preventive Maintenance Inspection (PMI) control system is designed to give shop management an improved method for scheduling and controlling the necessary cycles of maintenance inspection performed in local school districts.

Repair Procedure. Each day, the bus driver will complete a Driver Inspection Report (see Page 60) to be turned in to the director or designee at the end of each week. All repairs will be performed and documented by the signature of the mechanic completing the repair. After repairs are completed, the driver's copy of the work order will be furnished for verification and a copy will be filed in the individual vehicle file folder.

Preventive Maintenance Inspections. Preventive maintenance inspections will be scheduled as follows:

Inspection A - Safety Inspection W/Air Brake Adjustment	1,000 miles or monthly
Inspection B - Inspection A plus Oil Change- Gasoline	3,000 miles
Diesel	6,000 miles or service manual recommendation
Inspection C - Inspection A plus B plus Tune-up (gasoline only)	12,000 miles
Inspection D - Inspection A, B, and C plus Transmission	24,000 miles

Using the PMI control system will enable the school system to certify, at least once each month, that each school bus used during that month has received the proper safety inspection.

SCHOOL DISTRICT

VEHICLE MILEAGE REPORT

Tuesday, _____ 20____

VEHICLE NUMBER	MILEAGE	VEHICLE NUMBER	MILEAGE	VEHICLE NUMBER	MILEAGE	VEHICLE NUMBER	MILEAGE

B. WHY PM IS IMPORTANT AND COST EFFECTIVE

Proper and cost efficient maintenance can only be achieved through the use of a quality school bus preventive maintenance program.

Although it might be time consuming, a comprehensive preventative maintenance inspection program is the key to keeping school buses running economically and efficiently. To be effective, a maintenance system must focus on preventing problems. This means PM inspections of all buses, routine preventative work for mechanics, and replacing or repairing parts that are worn out. Preventative maintenance means that buses are less likely to have major breakdowns on the road. A preventative maintenance schedule means lower term costs.

The Goal - To Have No Road Breakdowns and To Ensure The Safest Transportation

A careful examination of school bus fleets indicates that the most efficient and successful pupil transportation programs are a result of a commitment to a comprehensive, well-planned vehicle maintenance program. The maintenance of vehicles is done on a schedule and is preventative in nature. While it may appear that scheduled maintenance increases the overall operating cost, the opposite is true. Preventative maintenance properly applied will assure that a vehicle is safer to operate, experiences fewer costly road failures, and is overall more reliable and economical to operate than vehicle maintenance on a demand or breakdown basis. The PMI (Preventative Maintenance Inspection) system allows for the planning of work schedules, which more efficiently use service personnel and allows for a more accurate forecast of maintenance cost. The maintenance program outlined here will ultimately lead to cost effectiveness, although the record keeping requirements seem burdensome. It will become second nature after a while and will provide the needed information on which to make sound decisions and provide safe, efficient and economical transportation for your school system.

Our objective is to provide Kentucky school districts with a uniform systematic maintenance management system designed to:

maintain all transportation vehicles in safe operating condition; and
maintain all transportation vehicles on a cost effective basis.

C. ITEMS WHICH DETERMINE SHOP LOAD

1. Service Run - Road Breakdown
2. Accident (Any "yes" answers to mechanical problems with vehicle should result in bus towed to the garage and should be put in quarantine until vehicle is thoroughly inspected for complaint)
3. Driver Inspection Report and/or Pre-Trip
4. Walk-In Complaint (driver)
5. Scheduled Maintenance (PM)
6. Parent Complaint

D. STATE TRANSPORTATION MANUAL AND MANUFACTURERS' MANUALS

Develop your program

Reference: State Manual, Chapter 6

Reference: Body Manual

Reference: Chassis Manual

You, as an inspector, can give help to the driver's training unit for emphasis on good driving habits and practice. You also have input on the pre-trip inspection done by the driver.

Always make your PM system grow with your fleet. Make improvements and adjustments for duty cycle and reference all manuals for recommendations.

Technician Identified in Specialist Category

A vehicle maintenance technician is a professional person. Securing and maintaining an efficient work force is crucial to the success of the vehicle maintenance program. The first broad part of this task is selection of the right employees. As used here, selection includes hiring of new employees, deciding who is to be promoted, and facing the unpleasant duty of discharging those who cannot be used effectively. Many delicate, individual problems are naturally involved.

A second part of the overall personnel job is training. Training shall be an integral part of the process of management and the specific purposes shall be defined. Policies are needed indicating the emphasis to be placed on inductions, job skills, human relationships, and economic education. Then the type of training (e.g., on-the-job activities, conferences, lectures, manufacturer's special schools, trade schools) that is most likely to achieve these purposes shall be selected.

Always use the manuals for your protection and to decrease your liability. Each chassis manual has a specific way of diagnosis, repairs and torque. If you follow the manual, you will find your down time and comeback rate will be less. Always use O.E.M. or equivalent parts and use quality oils and fuel.

TYPICAL DISCLAIMERS IN THE FRONT OF ALL SERVICE MANUALS

IMPORTANT SAFETY NOTICE

Appropriate service methods and proper repair procedures are essential for the safe, reliable operation of all motor vehicles as well as the personal safety of the individual doing the work. This shop manual provides general directions for accomplishing service and repair work with tested, effective techniques. Following them will help assure reliability.

There are numerous variations in procedures, techniques, tools, and parts for servicing vehicles, as well as in the skill of the individual doing the work. This manual cannot possibly anticipate all such variations and provide advice or cautions as to each. Accordingly, anyone who departs from the instructions provided in this manual must first establish that he/she compromises neither his/her personal safety nor the vehicle integrity by his/her choice of methods, tools, or parts.

NOTES, CAUTIONS, AND WARNINGS

As you read through the procedures, you will come across NOTES, CAUTIONS, and WARNINGS. Each one is there for a specific purpose. NOTES give you added information that will help you complete a particular procedure. CAUTIONS are given to prevent you from making an error that could damage the vehicle. WARNINGS remind you to be especially careful in those areas where carelessness can cause personal injury. The following list contains some general WARNINGS that you should follow when you work on a vehicle.

- Always wear safety glasses for eye protection.
- Use safety stands whenever a procedure requires you to be under the vehicle.
- Be sure that the ignition switch is always in the OFF position, unless otherwise required by the procedure.
- Set the parking brake when working on the vehicle. If you have an automatic transmission, set it in PARK unless instructed otherwise for a specific operation. If you have a manual transmission, it should be in REVERSE (engine OFF) or NEUTRAL (engine ON) unless instructed otherwise for a specific operation. Place wood blocks (4" X 4" or larger) to the front and rear surfaces of the tires to provide further restraint from inadvertent vehicle movement.
- Operate the engine only in a well-ventilated area to avoid the danger of carbon monoxide.
- Keep yourself and your clothing away from moving parts when the engine is running, especially the fan and belts.
- Do not smoke while working on the vehicle.

- To avoid injury, always remove rings, watches, loose hanging jewelry, and loose clothing before beginning to work on a vehicle. Tie long hair securely behind the head.
- Keep hands and other objects clear of the radiator fan blades. Electric cooling fans can start to operate at any time by an increase in under-hood temperatures, even though the ignition is in the OFF position. Therefore, care should be taken to ensure that the electric cooling fan is completely disconnected when working under the hood.

TYPICAL DISCLAIMERS IN THE FRONT OF ALL SERVICE MANUALS

FOREWORD . . .

This 1988 Truck Shop Manual has been prepared to provide information covering normal engine and related systems service repairs and maintenance for 1988 F-, B-, C-600 through 8000 Series Ford Trucks manufactured in the United States and Canada. Refer to the 1988 Engine/Emissions Diagnosis Manual for additional engine and emissions diagnosis information.

Body, Chassis, Electrical and Pre-Delivery, Maintenance and Lubrication service repairs are covered in the 1988 Medium/Heavy Truck Body, Chassis and Electrical Shop Manual and the 1988 Truck Pre-Delivery, Maintenance and Lubrication Manual.

This manual is divided into groups covering a general system. The basic part number for components covered in the group is also included in parenthesis after the group number. For example:

General System in Group	Group Number	Basic Part Number for Cooling System Components
Cooling System	Group 21	(8000)

Some components covered within a group do not have the same basic part number. In these cases, more than one basic part number will appear on the group index. For example:

General System Covered in Group	Group Number	Basic Part Number for Gasoline Engine Components	Intake & Exhaust Manifold Basic Part Number Only
Gasoline Engines	Group 21	6000	9000

With each group, the information is further divided into smaller sections. There is one section for each component in the system, as well as a General Services Station in some groups to cover procedures common to several sections within the group. In general, each section contains the Description, Operation, Diagnosis and Testing, Removal and Installation and Disassembly and Assembly procedures for the component covered in the Section. Diagnosis Charts are also included in some sections to help you systematically locate and correct problems encountered. In most cases, specifications are included at the end of each section.

To aid in locating specific items in this manual, use the Alphabetical Subject Index in the back of the manual, or the Group and Section Index on the following pages.

As a further aid, there is an index on the first page of each group listing the section title and basic part number for components covered within the group. The first page of each section contains an index to locate service operation covered in that section. This group-section breakdown is also indicated in the page number located at the top of each page.

Example: 21-01-10 (Group) 21 -- (Section) 01 -- (Page) 10

The descriptions, testing procedures, and specifications in this manual were in effect at the time the manual was approved for printing. Ford Motor Company reserves the right to discontinue models at any time, or change specifications, design or testing procedures without notice and without incurring obligation. Any reference to brand names in this manual is intended merely as an example of the types of tools, lubricants, materials, etc. recommended for use. Equivalents, if available, may be used. The right is reserved to make changes at any time without notice.

Ford Parts and Service Division
Training and Publications Department
1987 Ford Motor Company

TYPICAL DISCLAIMER IN THE FRONT OF ALL SERVICE MANUALS

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PREFACE

Your vehicle has been engineered and manufactured so that it can provide economical and trouble-free service. However, it is the owner's responsibility to see that the vehicle receives proper care and maintenance.

Making modifications to various parts, components and systems of your vehicle, such as brake and steering systems, can adversely affect the quality and reliability of your vehicle. Such modifications must be avoided.

CAUTION- THIS VEHICLE HAS MANY PARTS DIMENSIONED IN THE METRIC SYSTEM AS WELL AS THE ENGLISH SYSTEM. SOME FASTENERS ARE METRIC AND ARE VERY

CLOSE IN DIMENSION TO WELL-KNOWN ENGLISH FASTENERS IN THE INCH SYSTEM. MISMATCHED OR INCORRECT FASTENERS CAN RESULT IN DAMAGE TO THE VEHICLE OR POSSIBLY PERSONAL INJURY.

VEHICLE ENTRY AND EXIT

WARNING - FAILURE TO EXERCISE DUE CARE WHEN ENTERING AND EXITING VEHICLES CAN RESULT IN PERSONAL INJURY. ENTRY AND EXIT SHOULD BE MADE SLOWLY, DELIBERATELY AND CAREFULLY.

A THREE-POINT STANCE SHOULD BE USED (THREE OUT OF FOUR EXTREMITIES SHOULD BE IN CONTACT WITH THE VEHICLE AT ALL TIME). FACE INWARD TOWARD STEPS AND HANDHOLDS WHEN ENTERING AND EXITING. ALWAYS KEEP STEPS AND HANDHOLDS IN CONTINUOUS GOOD REPAIR. KEEP STEPS, GRAB HANDLES AND SHOES FREE OF GREASE, MUD, DIRT, FUEL, ICE AND SNOW. USE EXTRA CARE DURING INCLEMENT WEATHER.

1. A careful examination of school bus fleets indicates that the most efficient and successful pupil transportation programs are a result of a commitment to a comprehensive, well-planned vehicle maintenance program. The maintenance of vehicles is done on a schedule and is preventative in nature. While it may appear that scheduled maintenance increases the overall operating costs, the opposite is true. Preventative maintenance properly applied will assure that a vehicle is safe to operate, experiences fewer costly road failures, and is overall more reliable and economical to operate than a vehicle maintained on a demand or breakdown basis.
2. Scheduled servicing and thorough periodic inspections by the maintenance staff should be carried out in accordance with the recommendations of the manufacturer's service manuals, making allowance for any unusual operating conditions (see examples). Since all vehicles are designed and constructed to operate within specific limitations, each district must establish strict service intervals that will achieve optimum safety, vehicle longevity and cost savings. In no instance should maintenance intervals be greater than the manufacturer's recommendations.
3. The service interval for all vehicle components, not being the same, necessitates categorizing group components into separate service intervals. This can be done by identifying and grouping needed service or inspection more frequently (brakes, steering, tires) those with the next higher frequency rate, and so on, until the entire fleet has been scheduled for service and/or inspection. The terrain of the county may necessitate more frequent checks of transmissions and break services. Driving on gravel roads may require more frequent air filter changes.

CHAPTER 6 OF THE STATE PUPIL TRANSPORTATION MANAGEMENT MANUAL

MAINTENANCE

A careful examination of school bus fleets indicates that the most efficient and successful pupil transportation programs are a result of a commitment to a comprehensive, well-planned vehicle maintenance program. The maintenance of vehicles is done on a schedule and is preventative in nature. While it may appear that scheduled maintenance increases the overall operating cost, the opposite is true because preventative maintenance, properly applied, will ensure that a vehicle is safer to operate, experiences fewer costly road failures, and is overall more reliable and economical to operate than a vehicle maintained on a demand basis. This method allows for the planning of work schedules, which more efficiently uses service personnel and allows for a more accurate forecast of maintenance cost, which is vital when making out annual budgets. The maintenance program outlined in this manual will ultimately lead to cost effectiveness. Although the record keeping requirements seem burdensome, it will become second nature after a while and will provide the needed information on which to make sound decisions and provide safe, efficient and economical transportation for your school system.

OBJECTIVE:

Provide Kentucky school districts with a uniform systematic maintenance management system designed to:

- maintain all transportation vehicles in safe operating condition;
- maintain all transportation vehicles on a cost effective basis;
- provide a cost accounting system for all maintenance and transportation expenses;
- provide methods of purchasing;
- Generate reports necessary for cost accounting, audit trail, inventory, purchasing, and all other statistical needs; and

- identify maintenance facility needs.

All of the above objectives can be met with the following maintenance management system. However, the same objectives can be met with other systems using other forms or a combination of forms. All other maintenance management systems employed must generate the same information as the suggested system generates.

702 KAR 5:030 - SECTION 2

The superintendent (or his designee) shall require that a safety inspection be made on each school bus, owned and operated by the board or contracted to the board, at least once each month that the district's schools are in session. This inspection shall be made by a State approved inspector. If upon inspection a school bus is found to be in unsafe operating condition, the superintendent (or his designee) shall withhold the bus from operation until the required repairs are made. The superintendent shall be responsible for keeping the records of the bus safety inspections on file.

702 KAR 5:080 - SECTION 20

The driver shall make a pre-trip inspection of the bus and operating equipment each time the bus is used for the transportation of pupils.

INSTRUCTIONS FOR SCHOOL BUS MAINTENANCE MANAGEMENT SYSTEM

PURPOSE:

Proper and cost efficient maintenance can only be achieved through the use of a quality school bus maintenance management system. The intent of the school bus maintenance management system is to provide all Kentucky school districts with a similar plan of school bus maintenance.

The maintenance plan encompasses service writing, inventory control, data collection, and data processing. Components of maintenance management systems are:

- Work Order
- Preventive Maintenance Reports
- Service Run Requests
- Parts Inventories
- Purchase Orders
- Scheduled Repairs
- Daily Fuel and Mileage Reports
- Individual Vehicle Folder
- Financial Reports
- Data Processing Reports

INSTRUCTIONS TO IMPLEMENT MAINTENANCE MANAGEMENT SYSTEMS

The director/supervisor of pupil transportation coordinates and instructs maintenance personnel as to proper application of maintenance management systems and the control process necessary to ensure the efficient use of maintenance systems. The school bus maintenance facility must be staffed in a manner conducive to employment of a maintenance management system.

STAFFING:

Proper implementation of the maintenance management system requires staffing arrangements of the manner of:

Service Manager	Lead Technician	Technician
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To cost effectively perform school bus maintenance, other staffing needs may result:

Parts Manager	Service Writer	Clerks
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Parts Personnel	Inspector	Auto Body Workers
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Copies of these job descriptions are contained in the Kentucky Local District

Classification Plan.

WORK ORDER:

The work order is a 3-part form, which is to be completed at the timework is performed on any vehicle. Initial work order writing is to be performed by the service manager with the hard copy distributed to the mechanic performing the work. A vehicle out-of-service ticket is to be affixed to the steering wheel of any vehicle restricted from use for need of preventative maintenance, inspection, or repair. Out-of-service ticket shall remain with the vehicle until required work is performed, at which time, the ticket will be removed and become part of the work order supporting documentation.

PREVENTATIVE MAINTENANCE INSPECTION REPORTS

The PMIR (Preventative Maintenance Inspection Report) control system is designed to give shop management (Service Manager) a method of scheduling and controlling the necessary cycles of maintenance inspection performed.

DRIVER INSPECTION:

School bus driver shall be responsible for the completion of a driver inspection report each time the bus is placed into service. Repair work indicated as a result of driver inspection report will flow back through the maintenance management system via a work order.

All bus drivers are required by the Commercial Drivers License Act and Kentucky Administrative Regulation, 702 KAR 5:080, to perform daily pre-trip inspections to their vehicles and to report promptly, in writing, any defects discovered that might affect the safety of the vehicle operation or result in mechanical breakdown.

NOTE: The form must be kept daily and used as documentation of driver inspection or used as needed for reporting defects and driver requests for maintenance.

SERVICE RUN REQUEST:

All service runs shall require completion of a service run request with request compiled into a monthly service run summary. Work generated by service run shall be documented by work order.

PARTS INVENTORY:

All school bus maintenance facilities should have an inventory of those school bus parts whose flow generates the need for stock requirements. Inventory control shall be accomplished by a perpetual inventory system with parts entry and removal recorded daily. A fiscal inventory is required bi-annually, on June 30th and December 31st.

PURCHASE ORDERS:

All purchases of school bus parts should be the responsibility of the service manager, or his designee, with parts purchases accomplished by means of assigned and numbered 3-part purchase order requests. Payment will be disallowed on any purchase not verified by purchase orders and signed invoices.

DAILY FUEL AND MILEAGE REPORTS:

A log of all vehicle fuel and oil usage, showing current mileage, shall be completed and filed as part of the maintenance management system.

INDIVIDUAL VEHICLE FOLDER:

The maintenance copy of the work order and all of the aforementioned supporting documents should be filed in the individual maintenance folder with history of vehicle and vehicle repairs recorded on folder cover. Individual vehicle folders are to be retained in the maintenance facility and will serve as cost accounting documentation to qualify for pupil transportation cost reimbursement. The preventative maintenance management system will generate necessary financial and data processing reports. Reports, which can be generated by

the preventative maintenance management system are:

DATA PROCESSING REPORTS

- Preventative Maintenance Inspection Reports
- Inspection Reports
- Fuel Usage Reports
- Maintenance Cost Reports
- Inventory Control
- Summary of A, B, C, D Inspections
- Individual Vehicle Reports
- Individual Vehicle Summary By Repair Type and Work Code
- Parts and Supplies Order Schedule
- Preventative Maintenance Inspection Schedule
- Fleet Summary Reports
- Fleet Summary By Repair Type and Work Code
- Model Summary Reports
- Model Summary By Repair Type and Work Code

SUMMARY

Although it might be time consuming, a Comprehensive Maintenance System is the key to keeping school buses running economically and efficiently. To be effective, a maintenance system must focus on preventing problems. This means frequent checks of all buses, routine preventative work for mechanics, and replacing parts that are worn out. Preventative maintenance means that buses are less likely to have major breakdowns on the road. A preventative maintenance schedule means lower term costs.

As a minimum, your bus schedule maintenance program should include the following:

- documented pre-trip inspections by drivers;
- scheduled preventative maintenance inspections;
- service intervals that are no greater than manufacturer's recommendations;

- documented monthly safety inspections by a competent mechanic;
- records of repairs and service performed on each vehicle;
- records of repair and parts cost;
- records of fuel and oil use; and
- individual vehicle history and maintenance file.

PREVENTATIVE MAINTENANCE INSPECTION REPORTS

Kentucky Administrative Regulation, 702 KAR 5:030, requires that a safety inspection be made on each school bus as least once a month when schools are in session. Scheduled servicing and thorough periodic inspections by State approved school bus inspectors should be carried out in accordance with the recommendations of the manufacturer's service manuals, making allowance for any unusual operating conditions. Since all vehicles are designed and constructed to operate within specific limitations, each district must establish strict service intervals that will achieve optimum safety, vehicle longevity and cost savings. In no instance should maintenance intervals be greater than the manufacturer's recommendations. The service interval for all vehicle components, not being the same, necessitates categorizing group components into separate service intervals. This can be done by identifying and grouping the components needing service or inspection more frequent than those with the next higher frequency rate and so on until the entire fleet has been scheduled for service and/or inspection. The following preventative maintenance and safety inspection system is designed to give shop management an improved method for scheduling and controlling the necessary cycles of inspection and maintenance.

PLEASE NOTE:

Inspection A, when complete, will serve as documentation for the required monthly safety inspection. Inspections B, C, and D are shown with suggested mileage intervals (refer to

manufacturer's recommendations for actual requirements). The type and interval for a Preventative Maintenance and Safety Inspection schedule will be as follows:

<u>TYPE</u>	<u>INTERVAL</u>
Inspection A - Safety Inspection/Brake Adjustment	Monthly
Inspection B - Inspection A plus Oil Change	3,000 miles gasoline 6,000 miles diesel or manufacturers recommendation
Inspection C - Inspection A and B plus Tune-Up (gasoline powered units only)	12,000 miles
Inspection D - A, B and C plus Transmission	24,000 Miles

INSTRUCTIONS FOR PREVENTATIVE MAINTENANCE INSPECTION REPORTS

Inspection Schedule Number	Type	Operation to Perform
1-1	A B C D	Check Oil.
1-2	A B C D	Check ignition switch – start bus.
1-3	A B C D	Check noise, idle, knocks, missing, smoke, etc.
1-4	A B C D	Check governor for response and seal intact. See foreman if seal is broken.
1-5	A B C D	Check oil pressure response.
1-6	A B C D	Inspect gauges for response.
1-7	A B C D	Check for leaks and drain, check moisture ejector operation.
1-8	A B C D	Record build-up time of air pressure from 50 to 90 pounds. At first engine, idle, if it should not exceed five (5) minutes.
1-9	A B C D	Check for free play, travel and wear.
1-10	A B C D	Check clutch disengagement with engine running, push pedal to floor and shift into low gear.
1-11	A B C D	Driver test – Check 13 through 16.
1-12	A B C D	Shift transmission through shift pattern.
1-13	A B C D	Check horn operation.
1-14	A B C D	Check steering action.
1-15	A B C D	Test brake performance.
1-16	A B C D	Check operation and lubricate.
1-17	A B C D	Check washer operation.
1-18	A B C D	Check operation, blades and arm tension.
1-19	A B C D	Check windshield and vent glass.
1-20	A B C D	Check operation.
1-21	A B C D	Check engine shutdown.
1-22	A B C D	Check air bleed off.
1-23	A B C D	Check all lights and dimmer switch.
1-24	C D	Clean engine and accessories.
2-0		REAR AXLE
2-1	A B C D	Inspect for leaks and loose bolts.
2-2	A B C D	Check leaks.
2-3	A B C D	Check fluid level and magnetic plug.
2-4	D	Drain and refill.
2-5	A B C D	Check operation and leaks.
2-5	A B C D	Inspect bracket at front spring, pins and bushings.
2-6	A B C D	Inspect rear spring bracket pins, bushing and shackles.
2-7	A B C D	Inspect for operation.
2-8	A B	Inspect U-bolts.
	C D	Tighten U-bolts.
2-9	A B C D	Inspect rebound clips.
2-10	A B C D	Inspect center bolts.
2-11	A B C D	Inspect spring leaves or air bags.
2-12	A B C D	Inspect axle housing for damage.
2-13	A B C D	Inspect brake lines, hose and connections.
2-14	D	Inspect lining – Record percent remaining.

Inspection Schedule Number	Type	Operation to Perform
2-15	C D	Inspect backing plate for looseness and damage.
2-16	C D	Check for proper operation.
2-17	D	Inspect for damage and wear.
2-18	D	Clean and inspect bearing.
2-19	D	Inspect seals.
2-20	D	Inspect hub and drum.
2-21	D	Inspect s-cam and rollers.
2-22	A B C D	Check adjustment – Adjust properly.
2-23	D	Pull brake drums, inspect linings, drums and hardware.
2-24	D	Check condition and operation.
3-0	DRIVE LINES	
3-1	A B C D	Inspect yokes and splines for wear.
3-2	A B C D	Inspect flange bolts for looseness.
3-3	A B C D	Inspect universal joints for wear – Lubricate.
4-0	CHASSIS FRAME AND FUEL	
4-1	A B C D	Inspect for damage and looseness.
4-2	A B C D	Inspect for damage and leaks.
4-3	A B C D	Inspect for damage and leaks.
4-4	A B C D	Inspect for condition and looseness.
4-5	A B C D	Inspect fuel and brake line fittings for leaks, routing, friction and wear.
4-6	A	Check for leaks.
4-6	B	Change oil filter.
4-6	C D	Change air and fuel filters.
4-7	A B C D	Inspect air lines and hangers.
4-8	A B C D	Inspect splash guards.
4-9	C D	Inspect bolts and tighten.
4-10	D	Inspect frame rails for looseness and cracks.
4-12	D	Inspect cross members for looseness and cracks.
4-13	D	Inspect brackets for looseness and cracks.
5-0	TRANSMISSION	
5-1	A B C D	Check for leaks at seals, covers and plugs.
5-2	A B C	Check for correct fluid.
	D	Change transmission fluid and filter.
5-3	A B C	Inspect auxiliary filter.
	D	Change filter.
5-4	A B C	Inspect linkage.
	D	Remove and inspect magnetic plug – Check linkage for proper adjustment.
5-5	A B C D	Check modulator.
5-6	C D	Inspect breather and clean.
5-7	D	Inspect and tighten mounting.
5-8	D	Visual inspection.

Inspection Schedule Number	Type	Operation to Perform
6-0		CLUTCH
6-1	A B C D	Check mechanical clearance.
6-2	A B C D	Inspect return spring for wear.
6-3	B	Grease throw-out bearing.
6-4	C D	Inspect linkage for alignment and wear. Lubricate threads.
6-5	D	Inspect plate thickness – Record as percent of thickness.
6-6	D	Inspect throw-out bearing clearance.
6-7	D	Visual inspection.
7-0		FRONT AXLE
7-1	A B C D	Check for proper operation.
7-2	A B C D	Inspect for leaks and mountings.
7-3	A B C	Check adjustment – Adjust properly.
	D	Inspect lining – Record percent remaining.
7-4	A B C D	Inspect brake hose and connections for routing, damage and leaks.
7-5	A B C D	Inspect for looseness and damage.
7-6	A B C D	Inspect tie rods and ends for looseness and damage.
7-7	A B C D	Inspect front axle.
7-8	A B C D	Inspect spring leaves.
7-9	A B C D	Inspect front spring center bolts.
7-10	A B C D	Inspect front spring rebound clips.
7-11	A B C	Inspect U-bolts.
	D	Tighten U-bolts.
7-12	A B C D	Inspect front spring shackles, pins, bushings and brackets.
7-13	A B C D	Check operation – Inspect for leaks and bushings.
7-14	A B C D	Inspect thrust bearing.
7-15	A B C D	Inspect shims.
7-16	B C D	Change oil.
7-17	B C D	Grease thoroughly.
7-18	C D	Check kingpin play.
7-19	D	Inspect seals.
7-20	D	Clean and inspect bearings.
7-21	D	Inspect hub and drum.
7-22	D	Inspect wheel cylinders or cam and rollers.
7-23	D	Clean and inspect spindle.
7-24	D	Clean grease drains.
7-25	D	Pull brake drums, inspect lining, drums and hardware.
8-0		ENGINE
8-1	A B C D	Check for water leaks – condition and level.
8-2	A B C D	Inspect steering gear and U-joints.
8-3	A B C D	Loosen or remove and inspect fan belts.
8-4	A B C D	Check for fuel leaks – routing and condition.
8-5	A B C D	Inspect exhaust flanges for cracks and looseness.
8-6	A B C D	Check governor RPM's with dwell tach gauge or separate tach. Adjust necessary; reseal. Use foreman.
8-7	A B C D	Check for oil leaks as you inspect.
8-8	A B C D	Note oil pressure at idle – During road test.
8-9	A B C D	Test and record voltage range.
8-10	A B C D	Check call level.

Inspection Schedule Number	Type	Operation to Perform
8-11	C D	Test and record regulated amps and volts.
8-12	C D	Test starter draw.
8-13	C D	Remove and inspect air cleaner.
8-14	C D	Inspect crankcase ventilation.
8-15	C D	Inspect radiator mountings.
8-16	C D	Inspect water pump and bearings with belts loosened.
8-17	C D	Inspect alternator and bearings with belts loosened.
8-18	C D	Inspect fan assembly and bearings with belts loosened.
8-19	C D	Inspect for play and alignment.
8-20	C D	Check power steering pump.
8-21	C D	Check compressor.
8-22	C D	Clean or replace fuel filter. Check fuel pump pressure.
8-23	C D	Inspect smoke control system.
8-24	C D	Inspect manifolds for cracks and looseness.
8-25	C D	Inspect engine mounts.
8-26	C D	Inspect wiring, routing and condition.
8-27	C D	Check thermostat.
8-28	C D	Test coolant.
8-29	C D	Road test one mile.
8-30	C D	Visual inspection.
8-31	C D	Check operation.
8-32	C D	Check operation.
8-33	D	Per manufacturer's recommendation.
9-0	CAB AND BODY	
9-1	A B C D	Check grab handles and mirrors.
9-2	A B C D	Inspect for damage.
9-3	A B C D	Inspect for damage.
9-4	A B C D	Inspect for damage – Lubricate hinges.
9-5	A B C D	Inspect seals and weather stripping for wear.
9-6	A B C D	Inspect under-dash wiring.
9-7	A B C D	Inspect seats, mountings, belts and upholstery.
9-8	A B C D	Inspect emergency and safety equipment conditions.
9-9	A B C D	Inspect bay doors and cables on lift buses.
9-10	B C D	Per manufacturer's recommendations.
9-11	A B C D	Inspect for damage.
9-12	A B C D	Inspect front, rear and side panels for damage.
9-13	A B C D	Inspect front and rear bumpers.
9-14	A B C D	Inspect license plate and light.
9-15	A B C D	Inspect fuel tank cap.
9-16	A B C D	Inspect for alignment, damage and adjustment.
9-17	A B C D	Check stop arm for damage and operation.
9-18	C D	Lubricate speedometer cables.
9-19	C D	Check pedal shift side – Play for brake, accelerator.
9-20	C D	Inspect and clean.
9-21	C D	Wash
9-22	A B C D	Visual inspection.

Inspection Schedule Number	Type	Operation to Perform
10-0		PARKING BRAKE
10-1	A B C D	Inspect linkage for wear and adjustment.
10-2	A B C D	Inspect cable for routing and wear – Lubricate.
10-3	D	Inspect lining and check adjustment.
10-4	D	Check parking brake valve.
11-0		WHEELS AND TIRES
11-1	A B C	Visually check front end alignment.
	D	Machine check front end alignment.
11-2	A B C D	Inspect wheel and lock ring for cracks and rust.
11-3	A B C D	Inspect for missing, broken or loose.
11-4	D	Check tire balance – Spin wheel.
11-5	D	Check wheel stops for proper adjustment.
11-6	A B C D	Check air pressure and tread depth – Inflate to specifications. Probe tires.
Thru		
11-11		

MAINTENANCE MANAGEMENT AND COST ACCOUNTING FORMS

While the system of maintenance records may be tailored to the needs and capabilities of the individual school transportation operation, the number of reports and records needed, will depend upon the size of the operation and the number of persons associated with it. Preparation of any record should be justified by the use made of it. No record should be kept which does not contribute directly to the efficient management of the school transportation operation. Reports, which can be generated by the maintenance management system are shown below.

DATA PROCESSING REPORTS

- Preventative Maintenance Inspection Reports
- Inspection Reports
- Fuel Usage Reports
- Maintenance Cost Reports
- Inventory Control
- Summary of A, B, C, D Inspections
- Individual Vehicle Reports
- Individual Vehicle Summary By Repair Type and Work Code
- Parts and Supplies Order Schedule
- Preventative Maintenance Inspection Schedule
- Fleet Summary Reports
- Fleet Summary By Repair Type and Work Code
- Model Summary Reports
- Model Summary By Repair Type and Work Code

EXAMPLE FORMS USED WITH MAINTENANCE SYSTEM

While individual forms may differ from district to district, it is important that the information gathered be consistent. The following are examples of forms that may be used with the maintenance management system.

KENTUCKY DEPARTMENT OF EDUCATION

REPORT A

PREVENTATIVE MAINTENANCE INSPECTION REPORT

DATE ____ / ____ / ____ MECHANIC _____ VEHICLE NUMBER _____

ODOMETER _____ In space after each item indicate condition as follows:

() Item is O.K. (O) Adjustment Made (X) Repairs Needed (Write Up on Work Order)

No.	ITEM	No.	ITEM	No.	ITEM
-----	------	-----	------	-----	------

ROAD TEST ON LOT

1-1	Engine Oil (Quarts Low)	1-9	Clutch Disengagement	1-17	Windshield Wipers
1-2	Ignition Switch	1-10	Drive Test (On Lot)	1-18	Glass
1-3	Engine Operation	1-11	Transmission Shift	1-19	Heater & Defroster
1-4	Oil Pressure	1-12	Horn	1-20	Shutdown Operation
1-5	Instruments	1-13	Steering Play	1-21	Air Bleed Off
1-6	Air Tanks	1-14	Brake Performance	1-22	Lights & Reflectors
1-7	Air Pressure Build Up	1-15	Parking Brake		
1-8	Pedals & Pads	1-16	Windshield Washers		

REAR AXLE

2-1	Differential	2-6	Shackles	2-11	Spring Leaves
2-2	Pinion Seal	2-7	Breathers	2-12	Axle Housings
2-3	Fluid Level (Pts.)	2-8	U Bolts	2-13	Brake Lines & Connections
2-4	Shock Absorbers & Linkage	2-9	Rebound Clips	2-14	Brake Adjustments
2-5	Brackets	2-10	Center Bolts		

DRIVE LINES

CHASSIS FRAME & FUEL

3-1	Yokes & Splines	4-1	Tail Pipe	4-5	Lines & Fittings
3-2	Flange Bolts	4-2	Muffler	4-6	Air-Fuel-Oil Filters
3-3	Universal Joints	4-3	Exhaust Pipe	4-7	Air Lines & Hangers
3-4	Center Bearings	4-4	Hangers	4-8	Splash Guards

TRANSMISSION

FRONT AXLE

5-1	Leaks	7-1	Slack Adjusters	7-9	Center Bolts
5-2	Fluid Level (Pts.)	7-2	Brake Chambers	7-10	Rebound Clips
5-3	Auxiliary Filter	7-3	Brake Adjustment	7-11	U Bolts
5-4	Shift Linkage	7-4	Brake Lines & Connections	7-12	Shackles & Brackets
5-5	Modulator	7-5	Backing Plates	7-13	Shock Absorbers & Linkage
	CLUTCH	7-6	Tie Rods & Ends	7-14	Thrust Bearing
6-1	Mechanical (" Clear)	7-7	Axle	7-15	Shims
6-2	Return Spring	7-8	Spring Leaves		

In space after each item indicate condition as follows:

() Item is O.K. (O) Adjustment Made (X) Repairs Needed (Write Up on Work Order)

No.	ITEM	No.	ITEM	No.	ITEM
-----	------	-----	------	-----	------

ENGINE

8-1	Water Leaks		8-5	Exhaust Flanges		8-9	Battery Voltage Range (H to	
8-2	Steering Gear & U Joints		8-6	Governor (RPM)			(V) to (V)	
8-3	Fan Belts		8-7	Oil Leaks		8-10	Battery Cell Level	
8-4	Fuel Leaks		8-8	Oil Pressure				

CAB AND BODY

9-1	Grab Handles & Mirrors		9-7	Seat Belts & Upholstery		9-13	Bumpers	
9-2	Steps & Stepwell		9-8	Emergency & Safety		9-14	License Place & Light	
9-3	Doors & Stops		9-9	Bay Doors & Cables		9-15	Fuel Tank Cap	
9-4	Handles & Hinges		9-10	Inspect Wiring Loom		9-16	Hood & Latches	
9-5	Seals & Weather Stripping		9-11	Fenders		9-17	Stop Arm	
9-6	Under-Dash Wiring		9-12	Front, Rear & Side Panels				

WHEELS AND TIRES

11-	Alignment		11-2	Wheels & Lock Rims		11-3	Lugs & Studs	
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TIRE PRESSURE

	Dent/Pressure			Dent/Pressure		
11-6	Left Steering		11-9	Right Steering		
11-7	Left O. Drive		11-10	Right O. Drive		
11-8	Left I. Drive		11-11	Right R. Drive		

PREVENTATIVE MAINTENANCE INSPECTION REPORT

DATE ____ / ____ / ____ MECHANIC _____
VEHICLE NUMBER _____

ODOMETER _____ In space after each item indicate condition as follows:
() Item is O.K. (O) Adjustment Made (X) Repairs Needed (Write Up on Work Order)

No.	ITEM	No.	ITEM	No.	ITEM
-----	------	-----	------	-----	------

ROAD TEST ON LOT

1-1	Engine Oil (Quarts Low)		1-9	Clutch Disengagement		1-17	Windshield Wipers	
1-2	Ignition Switch		1-10	Drive Test (On Lot)		1-18	Glass	
1-3	Engine Operation		1-11	Transmission Shift		1-19	Heater & Defroster	
1-4	Oil Pressure		1-12	Horn		1-20	Shutdown Operation	
1-5	Instruments		1-13	Steering Play		1-21	Air Bleed Off	
1-6	Air Tanks		1-14	Brake Performance		1-22	Lights & Reflectors	
1-7	Air Pressure Build Up		1-15	Parking Brake				
1-8	Pedals & Pads		1-16	Windshield Washers				

REAR AXLE

2-1	Differential		2-6	Shackles		2-11	Spring Leaves	
2-2	Pinion Seal		2-7	Breathers		2-12	Axle Housings	
2-3	Fluid Level (Pts.)		2-8	U Bolts		2-13	Brake Lines & Connections	
2-4	Shock Absorbers & Linkage		2-9	Rebound Clips		2-14	Brake Adjustments	
2-5	Brackets		2-10	Center Bolts				

DRIVE LINES

CHASSIS FRAME & FUEL

3-1	Yokes & Splines		4-1	Tail Pipe		4-5	Lines & Fittings	
3-2	Flange Bolts		4-2	Muffler		4-6	Air-Fuel-Oil Filters	
3-3	Universal Joints		4-3	Exhaust Pipe		4-7	Air Lines & Hangers	
3-4	Center Bearings		4-4	Hangers		4-8	Splash Guards	

TRANSMISSION

FRONT AXLE

5-1	Leaks		7-1	Slack Adjusters		7-9	Center Bolts	
5-2	Fluid Level (Pts.)		7-2	Brake Chambers		7-10	Rebound Clips	
5-3	Auxiliary Filter		7-3	Brake Adjustment		7-11	U Bolts	
5-4	Shift Linkage		7-4	Brake Lines & Connections		7-12	Shackles & Brackets	
5-5	Modulator		7-5	Backing Plates		7-13	Shock Absorbers & Linkage	
	CLUTCH		7-6	Tie Rods & Ends		7-14	Thrust Bearing	
6-1	Mechanical (" Clear)		7-7	Axle		7-15	Shims	
6-2	Return Spring		7-8	Spring Leaves		7-16	Change Oil	
6-3	Bearing					7-17	Grease All Fittings	

In space after each item indicate condition as follows:

() Item is O.K. (O) Adjustment Made (X) Repairs Needed (Write Up on Work Order)

No.	ITEM	No.	ITEM	No.	ITEM
-----	------	-----	------	-----	------

ENGINE

8-1	Water Leaks		8-5	Exhaust Flanges		8-9	Battery Voltage Range (H to	
8-2	Steering Gear & U Joints		8-6	Governor (RPM)			(V) to (V)	
8-3	Fan Belts		8-7	Oil Leaks		8-10	Battery Cell Level	
8-4	Fuel Leaks		8-8	Oil Pressure				

CAB AND BODY

9-1	Grab Handles & Mirrors		9-7	Seat Belts & Upholstery		9-13	Bumpers	
9-2	Steps & Stepwell		9-8	Emergency & Safety		9-14	License Place & Light	
9-3	Doors & Stops		9-9	Bay Doors & Cables		9-15	Fuel Tank Cap	
9-4	Handles & Hinges		9-10	Inspect Wiring Loom		9-16	Hood & Latches	
9-5	Seals & Weather Stripping		9-11	Fenders		9-17	Stop Arm	
9-6	Under-Dash Wiring		9-12	Front, Rear & Side Panels				

WHEELS AND TIRES

11-	Alignment		11-2	Wheels & Lock Rims		11-3	Lugs & Studs	
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TIRE PRESSURE

	Depth/Pressure			Depth/Pressure		
11-6	Left Steering		11-9	Right Steering		
11-7	Left O. Drive		11-10	Right O. Drive		
11-8	Left I. Drive		11-11	Right R. Drive		

**PREVENTATIVE MAINTENANCE INSPECTION REPORT
FOR GASOLINE POWERED UNITS ONLY**

DATE ____ / ____ / ____ MECHANIC _____ VEHICLE NUMBER _____

ODOMETER _____ In space after each item indicate condition as follows:

() Item is O.K. (O) Adjustment Made (X) Repairs Needed (Write Up on Work Order)

No.	ITEM	No.	ITEM	No.	ITEM
-----	------	-----	------	-----	------

ROAD TEST ON LOT

1-1	Engine Oil (Quarts Low)		1-9	Pedals & Pads		1-17	Windshield Washers	
1-2	Ignition Switch		1-10	Clutch Disengagement		1-18	Windshield Wipers	
1-3	Engine Operation		1-11	Drive Test (On Lot)		1-19	Glass	
1-4	Governor		1-12	Transmission Shift		1-20	Heater & Defroster	
1-5	Oil Pressure		1-13	Horn		1-21	Shutdown Operation	
1-6	Instruments		1-14	Steering Play		1-22	Air Bleed Off	
1-7	Air Tanks		1-15	Brake Performance		1-23	Lights & Reflectors	
1-8	Air Pressure Build Up		1-16	Parking Brake		1-24		

REAR AXLE

2-1	Differential		2-6	Shackles		2-11	Spring Leaves	
2-2	Pinion Seal		2-7	Breathers		2-12	Axle Housings	
2-3	Fluid Level (Pts.)		2-8	U Bolts		2-13	Brake Lines & Connections	
2-4	Shock Absorbers & Linkage		2-9	Rebound Clips		2-14	Brake Adjustments	
2-5	Brackets		2-10	Center Bolts		2-15	Backing Plates	

DRIVE LINES

CHASSIS FRAME & FUEL

3-1	Yokes & Splines		4-1	Tail Pipe		4-6	Air-Fuel-Oil Filters	
3-2	Flange Bolts		4-2	Muffler		4-7	Air Lines & Hangers	
3-3	Universal Joints		4-3	Exhaust Pipe		4-8	Splash Guards	
3-4	Center Bearings		4-4	Hangers		4-9	Mounting Bolts	
			4-5	Lines & Fittings		4-10	Fuel Tank & Straps	

TRANSMISSION

CLUTCH

5-1	Leaks		5-5	Modulator		6-1	Mechanical (")	
5-2	Fluid Level (Pts.)		5-6	Breather		6-2	Return Spring	
5-3	Auxiliary Filter					6-3	Bearing	
5-4	Shift Linkage					6-4	Linkage	

In space after each item indicate condition as follows:

() Item is O.K. (O) Adjustment Made (X) Repairs Needed (Write Up on Work Order)

No.	ITEM	No.	ITEM	No.	ITEM
-----	------	-----	------	-----	------

FRONT AXLE

7-1	Slack Adjusters		7-7	Axle		7-13	Shock Absorbers & Linkage	
7-2	Brake Chambers		7-8	Spring Leaves		7-14	Thrust Bearing	
7-3	Brake Adjustment		7-9	Center Bolts		7-15	Shims	
7-4	Brake Lines & Connections		7-10	Rebound Clins		7-16	Change Oil	
7-5	Backing Plates		7-11	U Bolts		7-17	Grease All Fittings	
7-6	Tie Rods & Ends		7-12	Shackles & Brackets		7-18	King Pin	

ENGINE

8-1	Water Leaks		8-14	Air Cleaner		8-28	Engine Compression	
8-2	Steering Gear & U Joints		8-15	Crankcase/Ventilation			1 2 3 4	
8-3	Fan Belts		8-16	Radiator Mountings			5 6 7 8	
8-4	Fuel Leaks		8-17	Water Pump Bearings		8-29	Distributor	
8-5	Heat Riser		8-18	Alternator & Bearings		8-30	Wiring	
8-6	Exhaust Flanges		8-19	Fan Assembly & Bearings		8-31	Coil (Primary Volt.	
8-7	Governor (RPM)		8-20	Vibration Dampener		8-32	Timing	
8-8	Oil Leaks		8-21	Power Steering Pump		8-33	Carburetor	
8-9	Oil Pressure		8-22	Compressor		8-34	Air Fuel Ratio	
8-	Battery Voltage Range (H to		8-23	Fuel Pump		8-35	Thermostat	
	(.V) to (.V)		8-24	Smoke Control System		8-36	Anti-Freeze	
8-	Battery Cell Level		8-25	Manifolds		8-37	Road Test	
8-	Alt./Reg. (Volts. Amperes)		8-26	Engine Mounts				
8-	Starter Draw (AMPS		8-27	Spark Plugs				

CAB AND BODY

9-1	Grab Handles & Mirrors		9-8	Emergency & Safety		9-15	Fuel Tank Cap	
9-2	Steps & Stepwell		9-9	Bay Doors & Cables		9-16	Hood & Latches	
9-3	Doors & Stops		9-10	Inspect wiring loom		9-17	Stop Arm	
9-4	Handles & Hinges		9-11	Fenders		9-18	Speedometer Cable	
9-5	Seals & Weather Stripping		9-12	Front, Rear & Side Panels		9-19	Pedal Shaft Side Play	
9-6	Under-dash Wiring		9-13	Bumpers				
9-7	Seat Belts & Upholstery		9-14	License Plate & Light				

PARKING BRAKE

10-	Linkage		10-2	Cable				
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WHEELS AND TIRES**TIRE PRESSURE**

11-1	Alignment			Depth/Pressure			Depth/Pressure	
11-2	Wheels & Lock Rims		11-6	Left Steering		11-9	Right Steering	
11-3	Lugs & Studs		11-7	Left O. Drive		11-10	Right O. Drive	
			11-8	Left I. Drive		11-11	Right R. Drive	

PREVENTATIVE MAINTENANCE INSPECTION REPORT

DATE ____ / ____ / ____ MECHANIC _____ VEHICLE NUMBER _____

ODOMETER _____ In space after each item indicate condition as follows:

() Item is O.K. (O) Adjustment Made (X) Repairs Needed (Write Up on Work Order)

No.	ITEM	No.	ITEM	No.	ITEM
-----	------	-----	------	-----	------

ROAD TEST ON LOT

1-1	Engine Oil (Quarts Low)		1-9	Clutch Disengagement		1-17	Windshield Wipers	
1-2	Ignition Switch		1-10	Drive Test (On Lot)		1-18	Glass	
1-3	Engine Operation		1-11	Transmission Shift		1-19	Heater & Defroster	
1-4	Oil Pressure		1-12	Horn		1-20	Shutdown Operation	
1-5	Instruments		1-13	Steering Play		1-21	Air Bleed Off	
1-6	Air Tanks		1-14	Brake Performance		1-22	Lights & Reflectors	
1-7	Air Pressure Build Up		1-15	Parking Brake		1-23	Clean & Accessories	
1-8	Pedals & Pads		1-16	Windshield Washers				

REAR AXLE

2-1	Differential		2-8	U Bolts		2-15	Backing Plates	
2-2	Pinion Seal		2-9	Rebound Clins		2-16	Slack Adjusters	
2-3	Fluid Level (Pts.)		2-10	Center Bolts		2-17	Axle Shafts & Spindles	
2-4	Shock Absorbers & Linkage		2-11	Spring Leaves		2-18	Wheel Bearings	
2-5	Brackets		2-12	Axle Housings		2-19	Seals	
2-6	Shackles		2-13	Brake Lines & Connections		2-20	Hubs & Drums	
2-7	Breathers		2-14	Brake Lining		2-21	Wheel Cylinders	

DRIVE LINES**CHASSIS FRAME & FUEL**

3-1	Yokes & Splines		4-1	Tail Pipe		4-8	Splash Guards	
3-2	Flange Bolts		4-2	Muffler		4-9	Mounting Bolts	
3-3	Universal Joints		4-3	Exhaust Pipe		4-10	Fuel Tank & Straps	
3-4	Center Bearings		4-4	Hangers		4-11	Frame Rails	
			4-5	Lines & Fittings		4-12	Cross Members	
			4-6	Air-Fuel-Oil Filters		4-13	Brackets	
			4-7	Air Lines & Hangers				

TRANSMISSION**CLUTCH**

5-1	Leaks		6-1	Mechanical (" Clear)				
5-2	Fluid Level (Pts.)		6-2	Return Spring				
5-3	Auxiliary Filter		6-3	Bearing				
5-4	Shift Linkage		6-4	Linkage				
5-5	Modulator		6-5	Plate Thickness ()				
5-6	Breather		6-6	T. O. Bearing Clearance				
5-7	Mountings		6-7	Clutch Cable				

In space after each item indicate condition as follows:

() Item is O.K. (O) Adjustment Made (X) Repairs Needed (Write Up on Work Order)

No.	ITEM	No.	ITEM	No.	ITEM
FRONT AXLE					
7-1	Slack Adjusters	7-9	Center Bolts	7-17	Grease All Fittings
7-2	Brake Chambers	7-10	Rebound Clips	7-18	King Pin
7-3	Brake Adjustment	7-11	U Bolts	7-19	Seals
7-4	Brake Lines & Connections	7-12	Shackles & Brackets	7-20	Bearings
7-5	Backing Plates	7-13	Shock Absorbers & Linkage	7-21	Hubs and Drums
7-6	Tie Rods & Ends	7-14	Thrust Bearing	7-22	Wheel Cylinders
7-7	Axle	7-15	Shims	7-23	Spindles
7-8	Spring Leaves	7-16	Change Oil	7-24	Grease Drains

ENGINE

8-1	Water Leaks	8-11	Alt./Reg. (Volts. Amps)	8-22	Fuel Pump
8-2	Steering Gear & U Joints	8-12	Starter Draw (AMPS)	8-23	Manifolds
8-3	Fan Belts	8-13	Air Cleaner	8-24	Engine Mounts
8-4	Fuel Leaks	8-14	Crankcase/Ventilation	8-25	Engine Compression
8-5	Exhaust Flanges	8-15	Radiator Mountings		1 2 3 4
8-6	Governor (RPM)	8-16	Water Pump Bearings		5 6 7 8
8-7	Oil Leaks	8-17	Alternator & Bearings	8-26	Wiring
8-8	Oil Pressure	8-18	Fan Assembly & Bearings	8-27	Thermostat
8-9	Battery Voltage Range (H to	8-19	Vibration Damper	8-28	Anti-Freeze
	(V) to (V)	8-20	Power Steering Pump	8-29	Road Test
8-	Battery Cell Level	8-21	Compressor		

CAB AND BODY

9-1	Grab Handles & Mirrors	9-8	Emergency & Safety	9-15	Fuel Tank Cap
9-2	Steps & Stepwell	9-9	Bay Doors & Cables	9-16	Hood & Latches
9-3	Doors & Stops	9-10	Inspect wiring loom	9-17	Stop Arm
9-4	Handles & Hinges	9-11	Fenders	9-18	Speedometer Cable
9-5	Seals & Weather Stripping	9-12	Front, Rear & Side Panels	9-19	Pedal Shaft Side Play
9-6	Under-Dash Wiring	9-13	Bumpers		
9-7	Seat Belts & Upholstery	9-14	License Plate & Light		

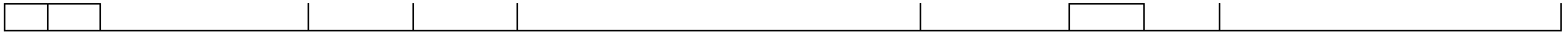
PARKING BRAKE

10-	Linkage	10-3	Lining & Adjustments		
10-	Cable	10-4	Parking Brake Valve		

WHEELS AND TIRES**TIRE PRESSURE**

11-1	Alignment		Depth/Pressure		Depth/Pressure
11-2	Wheels & Lock Rims	11-6	Left Steering	11-9	Right Steering
11-3	Lugs & Studs	11-7	Left O. Drive	11-10	Right O. Drive
11-4	Tire Balance	11-8	Left I. Drive	11-11	Right R. Drive
11-5	Wheel/Axle Stems				

OUTSIDE GARAGE - SERVICE				BOARD OF EDUCATION				Date Work Order Written			REASON FOR WORK (Check one only)										
SHOW ALL CHARGES FOR EACH SERVICE OPERATION PERFORMED INCLUDING PARTS, HOURS, ETC.								Vehicle Number			P.M. and/or Repair - 1 _____ Yard-Road Breakdown - 2 _____ Vehicle Abused - 3 _____										
NAME				WORK ORDER				If Continuation of No. Check Here _____			Vehicle Miscellaneous- 4 _____										
ADDRESS								Original W. O. Number			Refurbish - 5 _____										
CITY STATE ZIP								Work Order Number			Reported Accidents - 6 _____										
OUR PO NO. YOUR INV. NO.											Shop Operations - 7 _____										
Vehicle In (Deadline) Vehicle Out (Operational)											Other Departments - 8 _____										
W.O. WRITTEN BY:		APPROVED BY:		SERVICE RUN REQUEST NO.				Total Vehicle Downtime Hours _____ (Tenths)			WORK PERFORMED BY (Check one only) Company Labor - Parts - 1										
Company Labor Only		-INSTRUCTIONS- -WORK DETAIL-				Engine Add Oil		Engine Change Oil		If Warranty Check Here		Involved _____									
										Motor Reading (Odometer)		System Description									
												PM PM Work *Use PM No.									
Hours (Tenths)		System Code		Mech. NO. Or Initials		If Planned P.M. Service Date Mileage		Quantity		Part No.		Description		Price Each		System Code		Extended Amount		1 Cab Heating Venting, A.C.	
																				2 Cab Interior & Exterior	
																				3 Instruments	
																				11 Front Axle(s)	
																				12 Rear Axle(s)	
																				13 Brake System	
																				14 Frame (Chassis)	
																				15 Steering System	
																				16 Suspension System	
																				17 Tires	
																				18 Wheel, Rims, Hubs	
																				23 Clutch & Controls	
																				24 Drive Line	
																				26 Transmission	
																				31 Electrical Charging	
																				33 Engine Ignition	
																				34 Electrical Lighting	
																				41 Air Intake System	
																				45 Power Plant	
																				60 Towing	
																				61 Power Accessories	
																				62 Mech/Fixed Accessories	
																				63 Outside Repairs	
		Total Wage		C		Total								TOTAL PARTS &		Total \$					



BOARD OF EDUCATION

VEHICLE FUEL REPORT

Month: _____ Vehicle No.: _____

Driver: _____

Odometer Previous No. _____

[illegible]

TOTALS _____

SAMPLE VEHICLE FUEL REPORT

FUEL MONTHLY

[illegible]

38

Bill to: _____ Board of Education	VENDOR NAME AND ADDRESS	PURCHASE ORDER	
Address:			
ATTN:		PURCHASE ORDER NUMBER MUST APPEAR ON ALL INVOICES	
Ship To:		Purchase Order Number	Sequential Numbers
ATTN:	CODE:		

VENDOR ORDER NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
TAX EXEMPT NO. _____		TOTAL AMOUNT			

Authorized Signature

First Copy (Vendor)
Second Copy (Data Processing)
Third Copy (Writer)

DATE _____

SAMPLE PURCHASE ORDER

SAMPLE:

[illegible]

SAMPLE PERPETUAL PARTS INVENTORY CARD

BOARD OF EDUCATION

PHYSICAL PARTS INVENTORY

Month: _____ Day: _____ 20 _____

DESCRIPTION OF PART	QUANTITY	UNIT COST	TOTAL

Inventory to be priced at current cost.

Sample Physical Parts Inventory Form

Board of Education

SERVICE RUN REQUEST

Service Run Mileage:			
Bus No.	Time:	Date:	
Location:			
Time of Next Run:		Loaded:	Empty:
Driver's Report:			
Mechanic:			
Mechanic's Report:			
Parts Used:			

Sample Service Run Request

MONTHLY SERVICE RUN SUMMARY

BOARD OF EDUCATION

_____, 20_____
MONTH

DATE	BUS. NO.	LOCATION	TROUBLE FOUND	MILES	VEHICLE DOWN TIME	SERVICE RUN	WORK ORDER NO	SYSTEM NUMBER	MECHANIC

Sample Monthly Service Run Summary

MONTHLY SERVICE RUN SUMMARY
SCHOOL DISTRICT

Month _____ 20____

System No	Description	Total Last Month	Total This Month	Year To Date
01	Cab Heating, Venting, A.C.			
02	Cab Interior & Exterior			
03	Instruments			
11	Front Axle			
12	Rear Axle			
13	Brake System			
14	Frame (Chassis)			
15	Steering System			
16	Suspension			
17	Tires			
18	Wheels, Rims, Hubs			
23	Clutch and Controls			
24	Drive Line			
26	Transmission			
31	Electrical Charging			
32	Engine Starting			
33	Electrical Ignition			
34	Electrical Lighting			
41	Air Intake System			
42	Cooling System			
43	Exhaust System			
44	Fuel System			
45	Power Plant			
61	Power Plant			
62	Lift			
	Out of Fuel			
	Not at Location			
	Run Cancelled			
	No Problem Found			
	Accident			
	Fire			
	Other			

Total Service Runs
Fleet Total X
Total Service Runs vs. Fleet Total
Service Run Total 01-62
01-62 vs. Fleet Total
Service Run Total O/F – Other
Out-Fuel - Other vs. Fleet Total

DRIVER INSPECTION REPORT

DRIVER SIGNATURE _____ DATE _____

M _____
T _____
W _____
T _____
F _____

SCHOOL DISTRICT _____
COMPOUND NO. _____ BUS NO. _____

MECHANIC _____ SIGNATURE _____
DATE _____

M T W T F <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OK - DIFFERENTIAL _____ Defective	M T W T F <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OK-TRANSMISSION _____ Defective	M T W T F <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OK - TIRES & WHEELS _____ Steering _____ Drive	M T W T F <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OK - GLASS _____ Mirror _____ Window
M T W T F <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OK - EXHAUST _____ Defective	M T W T F <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OK - FRONT OR REAR DOOR _____ Defective	M T W T F <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OK - WINDSHIELD WASHER _____ Defective	M T W T F <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OK - WINDSHIELD WIPER _____ Defective
M T W T F <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OK-FIRST AID KIT _____ Missing _____ Incomplete	M T W T F <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OK-WARNING REFLECT _____ Broken _____ Missing	M T W T F <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OK - SEATS (Circle) _____ Slashed 1111111111111111 _____ Broken 1111111111111111	M T W T F <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OK-COOLING SYSTEM _____ Fan Belt _____ Radiator _____ Heater Leaks
M T W T F <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OK-BRAKES _____ Adjust Emergency _____ Adjust Foot _____ Grabs _____ No Air Pressure	M T W T F <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OK - MOTOR _____ Knocks _____ Smokes _____ Missing _____ Won't Idle _____ No Power _____ Overheats _____ No Oil Pressure	M T W T F <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OK - STEERING _____ Binds _____ Excessive Play _____ Shimmies	M T W T F <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OK - FIRE EXTINGUISHER
M T W T F <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OK-ELECTRICAL _____ Battery _____ Starter _____ Brake Light _____ Taillight _____ Clearance Light _____ Horn _____ Directionals _____ Headlights _____ Heater & Defroster _____ Instrument Panel _____ Rear Door & Brake Buzzer _____ Stop Arm & Light	M T W T F <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> BUS IS SAFE M T W T F <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> UNSAFE TO DRIVE TODAY _____	REMARKS: _____ _____ _____ _____ _____ _____	

BOARD OF EDUCATION

OUT OF SERVICE

VEHICLE NO. _____

DATE IN _____ / _____ / _____ TIME _____

MECHANIC'S NAME _____

REASON (OTHER THAN P. M.) _____

CHECK FOR P.M. COMPLETION

C ☐

RETURN TO SHOP

D ☐

ATTACH TO WORK ORDER NO. _____

REPAIRED BY _____

DATE OUT _____ / _____ / _____ TIME _____

SHOP COPY

Sample Out of Service Tag

PARTS TICKET

WORK ORDER NO.

BOARD OF EDUCATION

[illegible]

QTY.	ACCESSORIES – TIRES AND TUBES	COST AMT.
TOTAL ACCESSORIES →		

SAMPLE PARTS TICKET

BOARD OF EDUCATION

EDUCATIONAL AND EXTRA CURRICULAR TRIP INVOICES

NAME OF DRIVER:	BUS NUMBER:
DATE OF TRIP:	
SCHOOL:	DEPARTMENT:
DESTINATION:	
MILEAGE – RETURN	TOTAL MILES TRAVELED:
TIME DEPARTURE:	TIME RETURNED:
DRIVING TIME _____ = _____ Hours X Rate	
WAITING TIME _____ = _____ Hours X Rate	
TOTAL AMOUNT DUE DRIVER	
APPROVED FOR PAYMENT BY: <div style="text-align: right;">Director of Transportation</div>	

3 Copies

Director of Transportation – White
 Principal – Yellow
 Driver – Pink

SAMPLE TRIP INVOICE

SCHOOL BUS MAINTENANCE FACILITY

A properly designed and equipped school bus maintenance facility must be adopted for quality cost effective school maintenance.

PLANNING THE SCHOOL BUS GARAGE

When planning a school bus maintenance facility, careful consideration must be given to the following factors influencing decision to build or construct.

1. Cost of services being provided by local garages.
2. Availability of facilities for a maintenance garage.
3. Availability of maintenance personnel.
4. Other machine and tool maintenance costs. (All schools need repair and maintenance of tractors, trucks, cars, mowers, etc. Savings can be made by servicing such equipment in a garage.)
5. The amount of self-maintenance to be performed. (Smaller districts may want to contract major maintenance work but money can be saved by following a preventative maintenance program. Larger districts would save more with a complete self-maintenance program.)
6. Number and size of buses for the present and foreseeable future.
7. Number of service bays and type of service to be provided such as maintenance, repairs, tires, wash, etc.
8. Heating, electrical, ventilation, and utility services needed.
9. The location and type of fuel storage tanks to meet the State Fire Marshall's regulations and Federal regulations regarding underground storage tanks.

GENERAL DESIGN OF BUS GARAGE

The general design of a school bus garage, as indicated below, is not a cut-and-dry procedure, but a basic approach that can be tailored to suit conditions in school districts statewide.

1. Walls, partitions, and roofs should be of approved fire resistive materials.
2. Garages should be constructed to provide a minimum inside unobstructed height of 16 feet.
3. A bus garage should be planned with a series of bays, each bay to house a bus, and served by an overhead door.
4. Repair and wash stalls should not be less than 20 feet wide.
5. Minimum depth of garage should be 50 feet. The depth should be at least 100 feet (if buses are pulled from both sides).
6. A wash stall should be separated from a repair bay by a masonry wall at least 6 feet in height.
7. A concrete or metal threshold for entrance doors is essential. A concrete apron of adequate size and slope should be provided in front of each entrance door.
8. Floors should be concrete, reinforced with wire mesh, and properly pitched to floor drains. Concrete floors should be trowled, sealed, and contain a hardener to prevent chipping and grease penetration.
9. Roof structures must be sufficient strength to withstand snow loads.
10. Storage spaces for parts and supplies should be provided. If a fleet of considerable size is maintained, there should be a separate stockroom for parts. This room should be large enough for a desk and file space.

11. Lavatory and toilet facilities should be provided for mechanics and drivers.
12. It is practical to have a waiting room for drivers adjacent to the office area, which can be used in combination as a classroom for driver training purposes.

FACILITY EQUIPMENT

Facility equipment should include, but is not limited to;

1. One repair bay equipped with a hydraulic lift. If a lift is used, it should be a dual type and at least 28,000 pound capacity. The ceiling height minimum of 16 feet for the bay used for the lift should be sufficient to allow lift of the bus for proper working height.
2. The heating plant should provide for a minimum temperature of 50° inside when 0° outside.
3. Wash stalls should be fitted with hot and cold water hose bibs and drains with sewer traps.
4. Repair bays should be equipped with an exhaust pipe with flexible connection to remove engine exhaust fumes from the garage.
5. An air compressor should be of sufficient size to meet requirement of the garage's pneumatic equipment.
6. Fuel and oil service facilities should be convenient both to the buses and the office.
7. Liberal allowance must be made for both natural and artificial lighting of repair bays. Yard lights mounted on the building may be required.
8. Electrical service to the garage should be 220 volt, 3-phase as a minimum.
9. An eyewash and shower should be installed for mechanic's safety from corrosive materials and should include a shop first-aid kit.

CONTRACTED MAINTENANCE SERVICES

If a district chooses to contract its maintenance services, there should be a written agreement negotiated between the parties regarding extent of services, warranty of services, and charges for service. Legal restrictions placed upon the districts regarding bidding and purchasing should be considered when negotiating maintenance services. Various contracted services available to districts are:

- ❖ Local service stations. These usually offer only limited service such as fueling, tires, inspections, lubrications, minor part replacements, and parking facilities. Districts with limited spare vehicles should take into consideration that service stations are not always able to render immediate service.
- ❖ Local independent garages or dealers. May be able to provide services equal to a general repair center.
- ❖ Other school districts. Those that own and operate their own maintenance facility may accept contract work.
- ❖ Municipal, county or state shops. State highway and county road shops may offer fueling facilities more economically than other non-governmental agencies.
- ❖ Specialized services. Shops specializing in items such as repair of upholstery, body damage repairs, painting and replacement of glass may offer the most economical service.

If a district contracts for maintenance service, it will be necessary to establish an adequate record-keeping system. For instance, this would prevent excess mileage driving to and from a shop for minor repairs when other items could be performed at the same time. Regardless of fleet size or level at which a district operates, a staff member must be available to

coordinate all inspections, service, preventative maintenance and other major repairs.

FULL SERVICE MAINTENANCE FACILITY	DESCRIPTION	MINIMUM	OPTIMUM
SUPPORT AREAS	Work Bay	50' Long X 16' Wide X 16' High	60' Long X 20' Wide X 16' High
	Wash Bay		60' Long X 20' Wide
	Storage Loft		60' Long X 20' Wide
	Toilets, Ladies – Men		
	Office, Supervisor – Service Manager		
	Driver's Lounge		
	Storage Area, Small Parts		
	Machine Shop Area		
	Battery Storage/Charge Area		
	Tire Change Area		
	Mechanical Room		
	Flammable Storage Area		

FULL SERVICE MAINTENANCE FACILITY	DESCRIPTION	MINIMUM	OPTIMUM
EQUIPMENT AND BUILDING NEEDS	Twin Post Hydraulic Lifts		
	Exhaust System		
	30 Wiring		
	240 Volt, 4-Wire Outlets		
	240 Volt, 3-Wire Outlets		
	Air Compressor		
	Hot and Cold Water		
	Proper Lighting and Heating	Heating 50 at 0	
		Lighting, 100 Candle Work Area	
	Eyewash, shower and Other Safety Equipment		

FULL SERVICE MAINTENANCE FACILITY	DESCRIPTION	MINIMUM	OPTIMUM
FACILITY SIZE	Work Bays for: 1-25 Buses	2 Work Bays	
	Inspections for: 1-265 Buses	3 Work Bays	
	Preventative Maintenance for: 50-75 Buses	4 Work Bays	
	Scheduled Repair for: 75-100 Buses	5 Work Bays	

"N" INSPECTION - NEW VEHICLE

This is a good time to get information about the vehicle to ensure pre-delivery service was completed and to determine needed warranty repairs:

Bus number, VIN number, engine number, transmission number, lift number, GVWR, title, size, etc.

NEW VEHICLE INSPECTION REPORT

_____SCHOOLS DISTRICT

DATE _____/_____/_____ MECHANIC _____ VEHICLE SIDE NUMBER _____
 ENGINE SERIAL NO. _____ GVWR _____
 TRANSMISSION SERIAL NO. _____
 ODOMETER _____

In space after each item indicate condition as follows:

() Item is O.K. (0) Adjustments Made (X) Repairs Needed
 (W) Item needs warranty work (Write up on work order)

SYS.	NO.	ITEM	SYS.	NO.	ITEM	SYS.	NO.	ITEM
------	-----	------	------	-----	------	------	-----	------

ROAD TEST ON LOT

45	1-1	Engine Oil (Ots)	13	1-9	Pedals Y Pads	13	1-17	Windshield Washers
44	1-2	Ignition Switch	02	1-10	Clutch Disengagement	02	1-18	Windshield Wipers
33	1-3	Engine Operation	23	1-11	Drive Test (On Lot)	02	1-19	Glass
45	1-4	Governor	45	1-12	Transmission Shift	02	1-20	Heater & Defroster
44	1-5	Oil Pressure	26	1-13	Horn	01	1-21	Shutdown Operation
03	1-6	Instruments	02	1-14	Steering Play	45	1-22	Air Bleed Off
03	1-7	Air Tank (Drain)	15	1-15	Brake Performance	13	1-23	Lights & Reflectors
13	1-8	Air Pressure Build Up	13	1-16	Parking Brake			

REAR AXLE

12	1-2	Differential	16	2-6	Shackles	16	2-11	Spring Leaves
12	2-2	Pinion Seal	12	2-7	Breathers	12	2-12	Axle Housings
12	2-3	Fluid Level (Pts.)	16	2-8	U Bolts	13	2-13	Brake Lines &
	2-4	Shock Absorbers &	16	2-9	Rebound Clips	13	2-22	Brake Adjustment
	2-5	Brackets	16	2-20	Center Bolts	13	2-24	Brake Chamber

DRIVE LINES

CHASSIS FRAME & FUEL

24	3-1	Yokes & Splines	43	4-1	Tail Pipe	44	4-5	Lines & Fittings
24	3-2	Flange Bolts	43	4-2	Muffler	45	4-6	Air-Fuel-Oil Filters
24	3-3	Universal Joints	43	4-3	Exhaust Pipe	13	4-7	Air Lines & Hangers
24	3-4	Center Bearings	43	4-4	Hangers	02	4-8	Splash Guards
						02	4-9	Mounting Bolts

TRANSMISSION

FRONT AXLE

26	5-1	Leaks	13	7-1	Slack Adjusters	16	7-9	Center Bolts
26	5-2	Fluid Level (Ots.)	13	7-2	Brake Chambers	16	7-10	Rebound Clips
26	5-3	Auxiliary Filter	13	7-3	Brake Adjustment	16	7-11	U Bolts
26	5-4	Shift Linkage	13	7-4	Brake Lines & Connections	16	7-12	Shackles & Brackets
26	5-5	Modulator & Cooler	13	7-5	Backing Plates	16	7-13	Shock Absorbers &
26		Cooler Lines	15	7-6	Tie Rods & Ends	16	7-14	K. P. Bearing
		CLUTCH	11	7-7	Axle	16	7-15	Shims
23	6-1	Mechanical (" Clear)	16	7-8	Spring Leaves	45	7-16	Change Oil
23	6-2	Return Spring				16	7-17	Grease All Fittings
23	6-3	Bearing						

NOTE: CHECK PARKING BRAKE ON BACK OF THIS SHEET.

INSTRUCTIONS FOR NEW VEHICLE INSPECTION REPORTS

All operations to be performed by manufacturer's service manual procedures and specifications.

1. Change oil and oil filter.
2. Lube all grease fittings.
3. Change transmission auxiliary filter.
4. Check and correct all fluid levels.
5. Check brake chamber rod adjustment and for dragging.
6. Drain fuel water separator.
7. Check all lines and hoses for routing and type.
8. Check accelerator linkage and adjustment.
9. Check air bag height.
10. Check battery cable routing.
11. Seal battery cables.
12. Check all doors and exits for fit and operation.
13. Check alignment.
14. Aim head lights.
15. Check overall appearance.
16. Torque all U bolts.
17. Check for missing items specified in specification manual.
18. Check lift ground.
19. Check lift cable routing and length.
20. Check amp draw of lift while loaded.
21. Install license plate.
22. Check lift control cable for length and routing.

Note: All warranty items use code 003 for repair type on work order. Report all warranty items to local dealer.

INSTRUCTIONS FOR PREVENTATIVE MAINTENANCE INSPECTION REPORTS

The type and interval for a preventative maintenance schedule will be as follows:

A	Inspection	Monthly/1,000 Miles
	Safety inspection with brake adjustment. Put on the work order. Brake adjustments will be scheduled by the computer. Check all fluid levels and top off each. Air all tires unless replacement is needed. Repair all lights - if bulb replacement does not repair, put on work order. See items in the "Operation to Perform" section for "A" Inspection. All driver complaints will be put on the work order and noted as driver complaint.	
A B	Inspection	3,000 Miles - Gas 6,000 Miles – Diesel Not to exceed manufacturers Recommendation in the Service Manual
	Oil and oil filter change. Lube all grease fittings. Oil sample - diesel only. Check coolant freeze points and conditioner. See "Operation to Perform" for "B" Inspection. Check diesel air filter restriction gauge.	
A B C	Inspection (Gasoline Powered Units)	12,000 Miles
	Tune-up - put on W/O. Replace air filter on gas engines and all emission filters. Replace gas engine fuel filter. Service battery - clean and seal cables. "See Operation to Perform" for "C" Inspection. Check diesel engine air filter restriction gauge.	
A B C D	Inspection	24,000 Miles
	Transmission and rear end services. Replace coolant filters. Replace transmission auxiliary filters. Replace secondary and primary fuel filters. See "Operation to Perform" for "D" Inspection. "D" inspection will include body shop work.	

Quality Control and Reinspection - Work to Perform

Only recheck items on work order because the bus has been checked by one inspector, one or more mechanics and possibly service manager.

Service manager should be informed if bus failed for something other than safety item that is not on the work order. Service manager will have final say in rejection or failure of item. All safety items will fail (deadline) the bus and the bus will be sent back to shop for repair. Service Manager will also be notified of safety item that is failed and may want to discuss item with the inspector/mechanic.

THE FOLLOWING IS A GUIDE DETAILING THE EXPECTED TIME IT WILL TAKE TO DO INSPECTIONS AND REINSPECTIONS:

A	45 MINUTES
B	ONE HOUR
C	ONE HOUR AND 30 MINUTES
D	TWO HOURS AND 30 MINUTES
REINSPECTION	FIFTEEN MINUTES*

DEFINE OIL LEAK

Class I Shows signs of dampness and collecting dirt.

Class II Forms drops but does not drip. Repair during "D" inspection.

Class III Oil drips from the component. Repair when needed - anytime or any inspection.

Engine should be steam cleaned on Class III leak or during "D" inspection.

Any time an oil leak is on the exhaust (y-pipe) on a gas engine, it has to be repaired.

REMEMBER OVER TIME, YOUR EQUIPMENT WILL BE CLEANER WITH GOOD PM.

DETERMINING WHICH INSPECTION IS DUE IS SIMPLE ARITHMETIC

Within 1,000 miles C & D

Within 500 miles B

Current mileage _____

Last "D" inspection _____

_____ within 1,000 miles due "D"

Current mileage _____

Last "C" _____

_____ within 1,000 miles due "C"

Current mileage _____

Last "B" _____

_____ within 500 miles due "B"

Current mileage _____

Last "A" _____

REINSPECTION

1. YOUR RESPONSIBILITY IS QUALITY CONTROL.
2. The mechanic's job is to follow the service and repair procedures in the manufacturers' repair manuals and to have the motivation and training to be very conscientious of his/her work and responsibility. He/she should be confident in his/her work, be able to make judgment calls, and use good shop maintenance practice and use of tools.
3. You help in motivation and training.
4. Your main responsibility as an inspector is the safety of the buses you inspect. Dedication to your job will result in quality control.